Amendments to the claims

Claims 1-22 (canceled)

Claim 23 (currently amended) A process for the preparation of a ligand of formula (V):

 $SiR^1R^2Q'L'$ (V)

wherein

R¹ and R², the same or different from each other, are selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; optionally R¹ and R² form a ring comprising from 3 to 8 atoms, which can bear substituents;

Q' is a moiety of the general formula (VI):

$$R^4$$
 B
 R^3
 R^3
 R^3

and or its double bond isomers,

wherein A, B, R³ and R⁴ are defined as described as in claim 1;

wherein A and B are selected from sulfur (S), oxygen (O) or CR⁵, R⁵ being selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; either A or B being different from CR⁵, and wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; if A is S or O, B is CR⁵ or if B is S or O, A is CR⁵;

 R^3 and R^4 , the same or different from each other, are selected from hydrogen, a C_1 - C_{20} -alkyl, C_3 - C_{20} -cycloalkyl, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, C_7 - C_{20} -alkylaryl or C_7 - C_{20} -arylalkyl optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

L' is a moiety of the general formula (VII):

$$R^8$$
 R^7 (VII)

and or its double bond isomers,

wherein R¹, R²-R⁶, R⁷, R⁸ and R⁹ are defined as described as in claim 1, R⁶, R⁷, R⁸ and R⁹, the same or different from each other, are selected from C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; and at least two adjacent R⁶ and R⁷ or R⁸ and R⁹ can form a ring comprising from 3 to 8 atoms, optionally bearing substituents and optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

comprising the following steps:

i) treating the <u>a</u> compound of formula (VIII) with at least one equivalent of a base selected from the group consisting of metallic sodium and potassium, sodium and potassium hydroxide and an organolithium compound;

$$R^4$$
 B
 R^3
(VIII)

wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; A, B, R³ and R⁴ are defined as above;

ii) contacting the corresponding anionic compound obtained under from step i) with a compound of general formula (IX):

$$YL'SiR^1R^2$$
 (IX)

wherein L', R^1 , R^2 have the meaning described as in claim 1 above and Y is a halogen atom selected from the group consisting of fluoride, chloride, bromide and iodide[[;]].

Claim 24 (currently amended) A process for the preparation of a ligand of formula (V): as defined in claim 23

$SiR^{1}R^{2}O'L'$ (V)

wherein

R¹ and R², the same or different from each other, are selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; optionally R¹ and R² form a ring comprising from 3 to 8 atoms, which can bear substituents;

Q' is a moiety of the general formula (VI):

$$R^4$$
 B
 R^3
(VI)

or its double bond isomers,

wherein A and B are selected from sulfur (S), oxygen (O) or CR⁵, R⁵ being selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; either A or B being different from CR⁵, and wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; if A is S or O, B is CR⁵ or if B is S or O, A is CR⁵;

 R^3 and R^4 , the same or different from each other, are selected from hydrogen, a C_1 - C_{20} -alkyl, C_3 - C_{20} -cycloalkyl, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, C_7 - C_{20} -alkylaryl or C_7 - C_{20} -arylalkyl optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

L' is a moiety of the general formula (VII):

$$R^8$$
 R^7
(VII)

or its double bond isomers,

wherein R⁶, R⁷, R⁸ and R⁹, the same or different from each other, are selected from C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; and at least two adjacent R⁶ and R⁷ or R⁸ and R⁹ can form a ring comprising from 3 to 8 atoms, optionally bearing substituents and optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

comprising the following steps:

i) treating the <u>a</u> compound of formula (VIII) with at least one equivalent of a base selected from the group consisting of metallic sodium and potassium, sodium and potassium hydroxide and an organolithium compound;

$$R^4$$
 B
 R^3
(VIII)

wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; A, B, R³ and R⁴ are defined as in elaim 1 above;

ii) contacting the corresponding anionic compound obtained under from step i) with a compound of general formula (X):

$$Y_2SiR^1R^2$$
 (X)

wherein L', R¹, R² have the meaning described in elaim 1 above and Y is a halogen atom selected from the group consisting of fluoride, chloride, bromide and iodide;

iii) contacting the product obtained in step ii) with a compound of formula (XI):

$$R^{8}$$
 R^{7}
 R^{9}
 R^{6}
 (XI)

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wherein R⁶, R⁷, R⁸ and R⁹ are described as in claim 1 have the meaning reported above and G is selected from sodium, potassium and or lithium[[,]].

Claim 25 (currently amended) A process for the preparation of a metallocene of the general formula (I):

$$SiR^1R^2QLMXp$$
 (I)

wherein Q, L, R^1 , R^2 , M, X and p have the meaning as defined in claim 1, SiR^1R^2 is a divalent group bridging the moieties L and Q;

R¹ and R², the same or different from each other, are selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radical optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; optionally R¹ and R² form a ring comprising from 3 to 8 atoms, which can bear substituents;

O is a moiety of formula (II):

$$R^4$$
 B R^3 (II)

wherein A and B are selected from sulfur (S), oxygen (O) or CR⁵, R⁵ being selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; either A or B being different from CR⁵, and wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; if A is S or O, B is CR⁵ or if B is S or O, A is CR⁵;

 R^3 and R^4 , the same or different from each other, are selected from hydrogen, a C_1 - C_{20} -alkyl, C_3 - C_{20} -cycloalkyl, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, C_7 - C_{20} -alkylaryl or C_7 - C_{20} -arylalkyl optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

L is a moiety of formula (III):

$$R^8$$
 R^7
 R^9
 R^6

wherein R⁶, R⁷, R⁸ and R⁹, the same or different from each other, are selected from C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; and at least two adjacent R⁶ and R⁷ or R⁸ and R⁹ can form a ring comprising from 3 to 8 atoms, optionally bearing substituents and optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

M is an atom of a transition metal selected from those belonging to group 3, 4, 5, 6 or to the lanthanide or actinide groups in the Periodic Table of the Elements,

X, the same or different from each other, is a ligand selected from hydrogen, halogen, R¹⁰, OR¹⁰, OSO₂CF₃, OCOR¹⁰, SR¹⁰, NR¹⁰₂ or PR¹⁰₂ group, wherein R¹⁰ is selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; p is an integer of from 1 to 3, being equal to the oxidation state of the metal M minus 2;

comprising the following steps:

a) contacting a ligand of formula (V):

$$SiR^1R^2Q'L'$$
 (V)

wherein

Q', L', R¹ and R² are defined as in claim 26

Q' is a moiety of the general formula (VI):

$$R^4$$
 B
 R^3
(VI)

or its double bond isomers, wherein A, B, R³ and R⁴ are defined as above;

and L' is a moiety of the general formula (VII):

$$R^8$$
 R^7 (VII)

or its double bond isomers, wherein R⁶, R⁷, R⁸ and R⁹ are defined as above; with a base, wherein the ratio between said base and the compound of formula (V) is at least 2,

b) contacting the obtained product with a compound of formula MX_{p+2} , wherein M, X and p are defined as in claim 1 above.

Claims 26-29. (canceled)

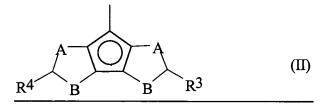
Claim 30 (currently amended) A metallocene compound of formula (I)

$$SiR^1R^2LQMXp$$
 (I)

wherein R^1 , R^2 , L, Q, M, X and p have the meaning as in claims 1-10 SiR^1R^2 is a divalent group bridging the moieties L and O;

 R^1 and R^2 , the same or different from each other, are selected from hydrogen, a C_1 - C_{20} -alkyl, C_3 - C_{20} -cycloalkyl, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, C_7 - C_{20} -alkylaryl or C_7 - C_{20} -arylalkyl radical optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; optionally R^1 and R^2 form a ring comprising from 3 to 8 atoms, which can bear substituents;

Q is a moiety of formula (II):



wherein A and B are selected from sulfur (S), oxygen (O) or CR⁵, R⁵ being selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; either A or B being different from CR⁵, and wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; if A is S or O, B is CR⁵

or if B is S or O, A is CR5;

 R^3 and R^4 , the same or different from each other, are selected from hydrogen, a C_1 - C_2 -alkyl, C_3 - C_2 -cycloalkyl, C_2 - C_2 -alkenyl, C_6 - C_2 -aryl, C_7 - C_2 -alkylaryl or C_7 - C_2 -arylalkyl optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

L is a moiety of formula (III):

$$R^{8}$$
 R^{7}
 R^{9}
 R^{6}
 R^{6}

wherein R⁶, R⁷, R⁸ and R⁹, the same or different from each other, are selected from C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; and at least two adjacent R⁶ and R⁷ or R⁸ and R⁹ can form a ring comprising from 3 to 8 atoms, optionally bearing substituents and optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

M is an atom of a transition metal selected from those belonging to group 3, 4, 5, 6 or to the lanthanide or actinide groups in the Periodic Table of the Elements,

X, the same or different from each other, is a ligand selected from hydrogen, halogen, R¹⁰, OR¹⁰, OSO₂CF₃, OCOR¹⁰, SR¹⁰, NR¹⁰₂ or PR¹⁰₂ group, wherein R¹⁰ is selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; p is an integer of from 1 to 3, being equal to the oxidation state of the metal M minus 2.

Claim 31 (currently amended) A ligand of formula (V):

 $SiR^1R^2Q'L'$ (V)

wherein R^{+} , R^{2} , L' and Q' have the meaning as in claims 1-10 R^{1} and R^{2} , the same or different from each other, are selected from hydrogen, a C_{1} - C_{20} -alkyl, C_{3} - C_{20} -cycloalkyl, C_{2} - C_{20} -alkenyl, C_{6} - C_{20} -aryl, C_{7} - C_{20} -alkylaryl or C_{7} - C_{20} -arylalkyl

radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; optionally R¹ and R² form a ring comprising from 3 to 8 atoms, which can bear substituents;

O' is a moiety of the general formula (VI):

$$R^4$$
 B
 R^3
(VI)

or its double bond isomers,

wherein A and B are selected from sulfur (S), oxygen (O) or CR⁵, R⁵ being selected from hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl or C₇-C₂₀-arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; either A or B being different from CR⁵, and wherein the rings containing A and B have a double bond in the allowed position having an aromatic character; if A is S or O, B is CR⁵ or if B is S or O, A is CR⁵;

 R^3 and R^4 , the same or different from each other, are selected from hydrogen, a C_1 - C_{20} -alkyl, C_3 - C_{20} -cycloalkyl, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, C_7 - C_{20} -alkylaryl or C_7 - C_{20} -arylalkyl optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

L' is a moiety of the general formula (VII):

$$R^8$$
 R^7 (VII)

or its double bond isomers,

wherein R^6 , R^7 , R^8 and R^9 , the same or different from each other, are selected from C_1 - C_{20} -alkyl, C_3 - C_{20} -cycloalkyl, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, C_7 - C_{20} -alkylaryl or C_7 - C_{20} -arylalkyl radicals optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements; and at least two adjacent R^6 and R^7

- or R⁸ and R⁹ can form a ring comprising from 3 to 8 atoms, optionally bearing substituents and optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements.
- Claim 32 (canceled)
- Claim 33 (new) A copolymer of ethylene with propylene and a polyene, having a content of ethylene derived units comprised between about 50 mol% and 99 mol%, a content of propylene derived units comprised between about 1 mol% and 50 mol% and a content of a C₄-C₃₀-polyene derived units comprised between about 0 mol% and 30 mol%, and having the following characteristics:
 - (A) the % by mole content of propylene in the copolymer (%P) and the ratio EPE/(EPE+ PPE + PPP), wherein EPE, PPE and PPP represent the sequences ethylene/propylene/ethylene, propylene/propylene/ethylene and propylene/propylene/propylene respectively in the copolymer, satisfy the following relationship:
 - $0.01\%P + EPE/(EPE + PPE + PPP) \ge 1$
 - (B) less than 1% of the CH_2 groups in the polymeric chain are sequences $(CH_2)_n$, wherein n is an even number.
- Claim 34 (new) The copolymer according to claim 33, wherein a product of reactivity ratios r_1 r_2 , wherein r_1 is the reactivity ratio of propylene and r_2 that of ethylene, is lower than 0.2.
- Claim 35 (new) The copolymer according to claim 33, having an intrinsic viscosity (I.V.) > 0.5.